

LITHOGRAPHIC APPARATUS, DEVICE MANUFACTURING METHOD, AND METHOD FOR DETERMINING Z-DISPLACEMENT

ABSTRACT

The present invention provides a method for determining a displacement in a z-direction, of an object which is fixed in a holder of an apparatus, by means of an interferometer system, wherein the object is illuminated by a beam of radiation, said beam being provided by said apparatus and having an optical axis extending in the z-direction. The method comprises arranging the measuring mirror(s) and/or measuring laser beam of an interferometer system such that no relevant part of the laser beam is parallel to the z-direction. This ensures that the interferometer system and its parts may be arranged away from the beam of radiation, allowing larger diameter projection systems for said beam of radiation, as well as more homogeneous air showers around said object. Thus the quality of the illumination of the object may be improved.

The invention further provides a lithographic apparatus incorporating the method, as well as a device manufacturing method using the lithographic apparatus and/or the method for determining z-displacement according to the invention.